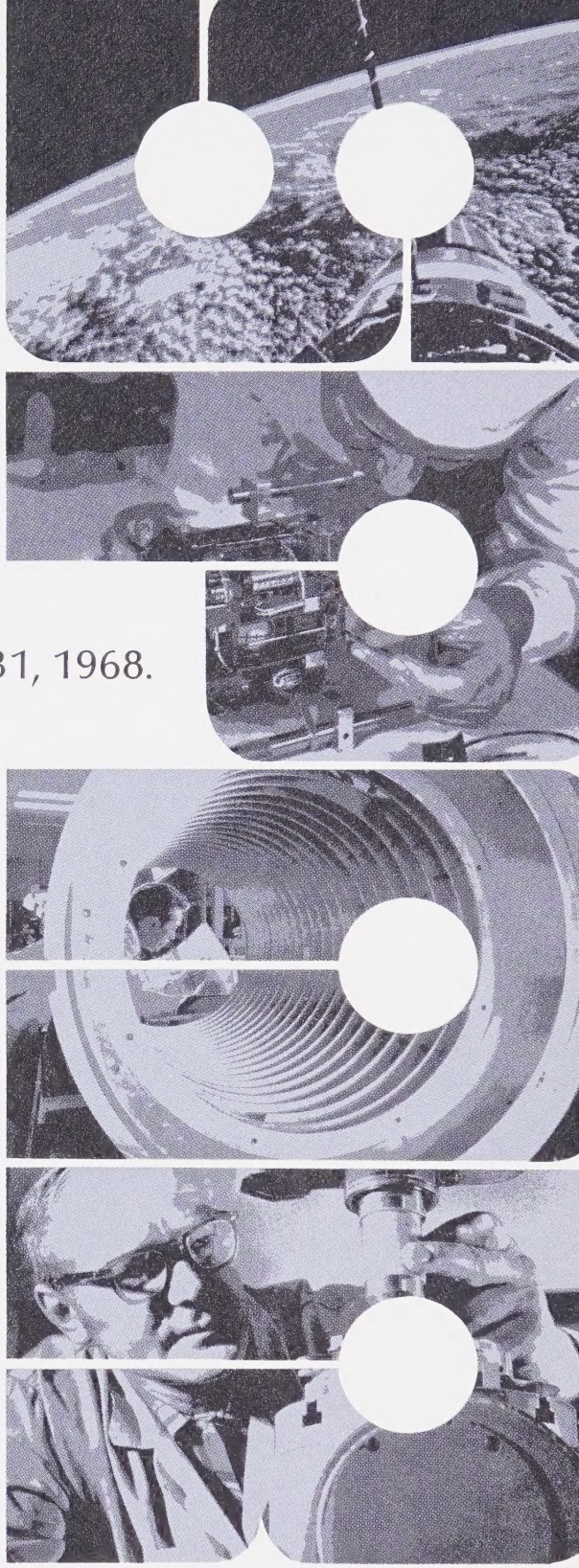
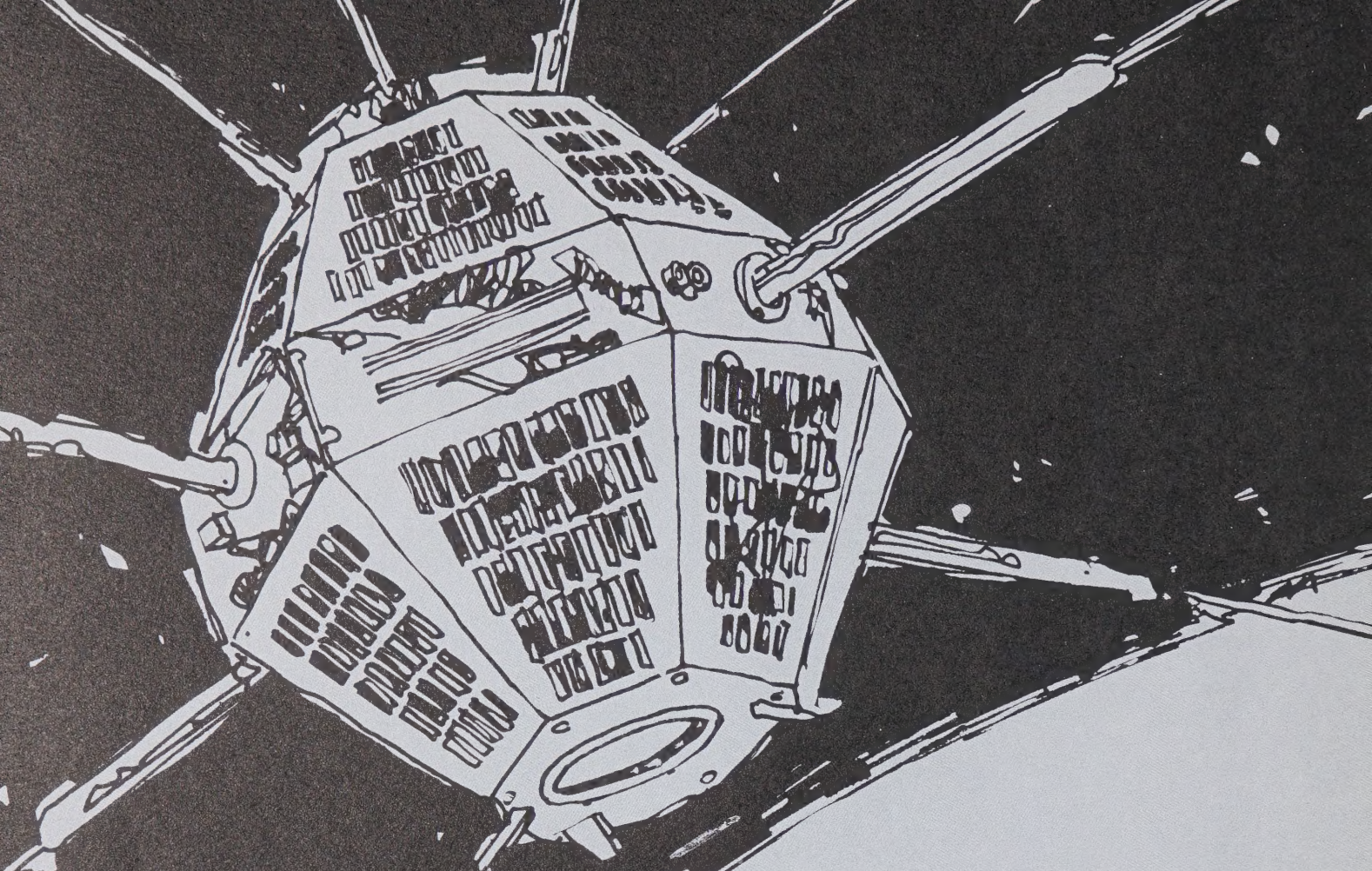
AR20



ANNUAL REPORT for the year ended December 31, 1968.

SPAR AEROSPACE PRODUCTS LTD



SPAR made major contributions to the Canadian ISIS "A" spacecraft launched by NASA for the Canadian Defence Research Board.

Spar Aerospace Products Ltd.

SPAR

ANNUAL REPORT 1968

Directors and Officers

Directors:

L. D. Clarke
C. H. Barrett
R. B. Dodwell
W. H. Jackson
Dr. P. A. Lapp
Dr. G. N. Patterson
M. R. Wade

Officers:

R. B. Dodwell, *Chairman of the Board & Treasurer*
L. D. Clarke, *President & Chief Executive Officer*
Dr. P. A. Lapp, *Senior Vice-President*
S. A. McKittrick, *Vice-President, Finance*
D. P. Roberton, *Vice-President, Operations*
D. A. B. Steel, *Secretary*

Letter to the Shareholders

I am pleased to submit to our over 1,600 registered shareholders SPAR's first Annual Report.

Nineteen hundred and sixty-eight, being our first year of operations as an independent company, was both exhilarating and demanding. During the year we were engaged in the substantial organizational effort that is required of any new company. We also continued to place heavy emphasis on research and development leading to new products coupled with the initial marketing steps necessary to promote such products. Notwithstanding the heavy organizational expenses which were all written off as a charge against profits, we finished the year with an operating profit of $47,894.00 or $0.05 per share on sales of slightly in excess of $5 million; together with a strong 3:1 current ratio which will permit us to face the build up of activities over the next few years with confidence.

We have written off to retained earnings expenses of $34,000 (after applicable income taxes of $18,000) in relation to organizational, share issue and other expenses in connection with the formation of your company.

ORGANIZATIONAL TASKS

On taking over the former The de Havilland Aircraft of Canada, Limited's SPAR activity, we had to consolidate our manufacturing operations within the leased premises and to initiate all the many changes in form, practice and procedure necessary for an independent operation. Next, we took inventory of our assets in people, products and equipment and established priorities of effort directed towards achieving our objective of developing a long term viable business based on our sophisticated engineering products.

Our traditional aerospace activities in the fields of mechanics, electronics, electro-optics and pneumatics were organized into separate project centres supported by common finance, manufacturing, marketing and personnel departments. To these traditional activities were added the Pritchard line of X-Ray equipment and radiological services and the Foamlock line of urethane structures developed by Applied Chemical Foams Limited (acquired as a subsidiary in July) based upon a National Research Council design approach.

RESEARCH AND DEVELOPMENT

Our research and development expenditures in support of SPAR products during the year totalled approximately $350,000. Of this amount, $150,000 was incurred in relation to our STEM

products and resulted in the development of an inter-locked version of the BI-STEM, which has enabled us to maintain our position of leadership in the field of extendible space antennas.

PROGRAM ACTIVITIES

With $2 million sales, our aircraft equipment repair and overhaul remained the largest single business activity. Through the negotiation of service station (overhaul) agency agreements with Leland Airborne Products, Collins Radio Co. of Canada, Ltd., and Marotta Valve Corporation we are now able to overhaul these companies' equipment for Canadian commercial aircraft operators. During 1969 we will continue to seek new service station agencies and thus reduce our very substantial dependence on Government business in this area.

Our Aerospace STEM (Storable Tubular Extendible Member) activities for space and ground antenna and mast applications continued to enjoy a very large share of the established market and to open up new markets due to the success of our engineers in bringing forward novel concepts such as the interlocked BI-STEM for satellite gravity gradient booms. Evaluation quantities of our BI-STEM Tripod were successfully tested by the U.S. military, and the BI-STEM was for the first time used as an actuator in a commercial process control application. Development continued on our Starrlite actuator for police and emergency vehicle lighting and beacon systems and initial production will commence on this model before the end of 1969.

Our power products sales continued at a satisfactory level and we commenced the development of a line of nickel-cadmium battery chargers based on the license received from the Canadian Government for coulometric control systems. Development will continue throughout 1969 leading to product sales in 1970.

Our infra-red and optical work continued for both commercial and military applications. Preliminary production quantities of the Hotspotter (hand held infra-red fire detection system) were delivered for market evaluation, with additional production quantities planned for 1969. Significant contracts were received for studies and development work in respect to U.S. military applications of advanced infra-red acquisition systems based on our Mauler system and continuing work is anticipated in this area during 1969. An initial quantity of Jackson Stereo-Projectors were completed and are presently being evaluated in a number of potential market areas. Two money losing optical development contracts in progress at the start of the year were completed during the third quarter and further work on these two systems was terminated.

Our space systems work in support of RCA Victor Company Limited's successful ISIS "A" program for which we constructed the structure and the antennas culminating in the very successful launch into orbit of this satellite on January 29th of this year. During 1968 we assisted RCA in the preliminary design of the ISIS "B" and are now engaged in the manufacture of the structure and antennas for this new satellite. All of this work should place us in strong contention for significant participation in respect to the proposed CANSAT program in which we form part of the RCA Victor team.

We completed delivery at the year end of the preproduction batch of gimbals for the Marconi F-111 doppler radar, and are now engaged in quantity production of follow-on units for 1969 delivery. We have initiated an aggressive selling program for additional sub-contract work matching our specialized facilities.

MARKETING ACTIVITIES

Marketing arrangements in support of our new product areas have been entered into with a number of United States and European firms. In 1968 we announced the arrangement with Sonotone Corporation, Battery Division, which is the world's largest manufacturer of airborne nickel-cadmium batteries, under which Sonotone and SPAR will market jointly our coulometer controlled battery charger system. At the beginning of April, 1969 we were able to announce an arrangement with the General Dynamics Corporation, Pomona Division, under which we would jointly pursue the market for infra-red acquisition systems in the United States and a somewhat similar arrangement is in course of negotiation with another American Company with respect to our Decompression Computer. A North American distributor has been appointed for the Hotspotter, and a similar type of distribution arrangement is being negotiated in support of the Starrlite system.

Through these marketing arrangements we can supplement our in-house sales effort which is principally directed at our aerospace STEMs, power supplies, satellite systems, repair and overhaul and sub-contract services. During the first half of 1969 we will continue to incur heavy expenditures in developing our marketing team

and sales activities in support of both our traditional aerospace lines and our new ventures into radiological equipment and services, and foam products.

EMPLOYEE RELATIONS

Notwithstanding a substantial reduction in personnel following the SPAR takeover, we enjoyed the highest level of support and co-operation from all of our over 300 employees. Their efforts during 1968 have done a great deal to provide your Management with its high level of confidence as to SPAR's ability to exploit its future opportunities.

During 1968 we concluded a 39 month agreement covering our factory employees and are currently negotiating with our office employees for a new agreement.

GOVERNMENT RELATIONS

Notwithstanding our increasing emphasis on non-aerospace products, we must continue to look to the aerospace market for our principal source of income and profits for the near term future. In this regard the continuing erosion of the domestic aerospace market, to the point where 60% of the Canadian aerospace industries' sales are exported, give rise to concern. It is to be hoped that Government policy with respect to such matters as satellite communications and defence will soon be defined so that firm industrial planning can be initiated on the basis of a predictable domestic market as well as the less certain export market.

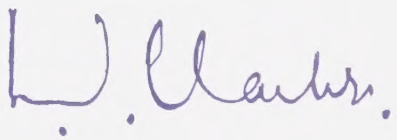
The Federal Government has been most generous in its support of industrial research and development, and your company has benefited substantially from such support. In addition to the $60,069 to be received under the Industrial Research and Development Incentives Act, we are presently receiving assistance in respect to STEMs, Starrlite, the Coulometer System and the Decompression Computer. In 1969 we intend to apply for assistance in acquiring the advanced machinery necessary to maintain our competitive position in the manufacture of precision electro-mechanical devices.

FUTURE OPERATIONS

Your management is optimistic that the above mentioned operations will become more profitable this year. In 1968, substantial organizational costs were incurred, none of which was capitalized. In 1969, as mentioned above, marketing activity is being expanded substantially, This, of course, means increased expenditures in the marketing department. As this program cannot start to produce significant results until after the middle of this year, first half profits will be below those that are being budgeted for in the second half. Outside of the marketing area, your Company is directing major attention to reducing or controlling costs. Departmental expenditure budgets have been based on sales volumes slightly below 1968 levels. This budgeting policy is designed to produce an increase in profits even if no increase in the volume of business is obtained. Therefore, any increase in sales should have a salutary effect on profit margins.

In conclusion, your Board would like to thank all the SPAR employees who have assisted us greatly in easing the transition over the past year as well as the shareholders who have placed their confidence in our ability to develop a successful company.

Sincerely,



L. D. Clarke,

President & Chief Executive Officer

Statement of Consolidated Source and Use of Funds

for the year ended December 31, 1968

Source of funds:	
Earnings for the year	$ 47,894
Add back depreciation and amortization	45,333
Funds from operations	93,227
Net book value of fixed asset disposals	1,677
Issue of shares	*1,762,794
	1,857,698
Use of funds:	
Additions to fixed assets	233,578
Working capital deficiency of subsidiary company at date of acquisition	55,045
Payment of organization, share issue and other initial expenses net of income taxes	34,000
	322,623
Working capital, December 31, 1968	$1,535,075

*Includes $1,749,257 received in respect of shares issued during November 1967 (note 5 (a)).

(See accompanying notes to financial statements)

Auditors' Report

to the Shareholders of Spar Aerospace Products Ltd.

We have examined the consolidated balance sheet of Spar Aerospace Products Ltd. and subsidiary companies as at December 31, 1968 and the statements of consolidated earnings and retained earnings and consolidated source and use of funds for the year ended on that date. Our examination included a general review of the accounting procedures and such tests of accounting records and other supporting evidence as we considered necessary in the circumstances.

In our opinion, these financial statements present fairly the financial position of Spar Aerospace Products Ltd. and subsidiary companies as at December 31, 1968, and the results of their operations and the source and use of their funds for the year then ended, in accordance with generally accepted accounting principles.

Clarkson, Gordon & Co.

Toronto, Canada, March 13, 1969.

Chartered Accountants.

Notes to Consolidated Financial Statements

December 31, 1968

1. General

The company was incorporated on October 27, 1967 and commenced operations on January 1, 1968 following its purchase of the assets (other than realty and accounts receivable) of The Special Products and Applied Research Division (SPAR) of The de Havilland Aircraft of Canada, Limited. The accompanying financial statements reflect the results of operations for the twelve months ended December 31, 1968.

2. Research and development costs and Government incentive grants

The company follows the practice of expensing all research and development expenditures as incurred with the exception of costs related to the manufacture of plant and machinery for development purposes. The latter expenditures are capitalized and included as plant and equipment.

In respect of 1968 the company has received, or is eligible to receive, grants and assistance aggregating $136,000 under various Canadian Government assistance programs. These amounts have been applied to reduce research and development costs by $128,000 and the capital cost of research equipment by $8,000.

Amounts aggregating approximately $50,500 received by the SPAR division of de Havilland in 1967 and prior years in the form of subsidies for research and development under The Programme for the Advancement of Industrial Technology may be repayable by the company in future years on successful sales relating to the research concerned. To date no applicable sales have been made.

3. Inventories

Inventories are classified as follows:

Raw materials, parts and supplies	$ 270,811
Work in process	2,179,586
Finished goods	58,933
	2,509,330
Less progress payments	1,486,639
	$1,022,691

Inventories of raw materials and finished goods are valued generally at the lower of cost, applied on a moving average basis, and market value determined on the basis of replacement cost or net realizable value, whichever is lower.

$1,853,942 of the inventory of work in process represents large contracts valued on the percentage of completion method, whereby estimated profits are taken up as the work is performed. Where the estimate of total costs on a contract indicates a loss, provision has been made for the total loss anticipated. The balance of work in process, $325,644 represents material purchases and costs on certain jobs which are not sufficiently advanced to warrant a valuation on a percentage of completion basis.

4. Bank indebtedness

The bank indebtedness is secured by a general assignment of the accounts receivable and inventories.

5. Capital stock

a) The following table details the capitalization of the company:

	Authorized shares	Maximum consideration for which authorized shares may be issued	Issued and outstanding December 31, 1968	
			Number	Amount paid up
Common shares without nominal or par value	2,000,000	$2,000,000	917,220	$1,758,294
1st deferred shares without nominal or par value	200,000	200,000	150,000	1,500
2nd deferred shares without nominal or par value	200,000	200,000	150,000	1,500
3rd deferred shares without nominal or par value	200,000	200,000	150,000	1,500
	2,600,000	$2,600,000	1,367,220	$1,762,794

In 1967 the company issued 910,000 common shares for an aggregate cash consideration of $1,744,757 after deducting underwriting commissions of $87,500. The company also issued 450,000 deferred shares for $4,500.

During the year ended December 31, 1968, 7,220 common shares were issued under the company's stock option plan for $13,537 (note 5 (c)).

b) Deferred shares

Dividends are not payable on the deferred shares until the year following that in which the consolidated net profit of the company after tax exceeds, in the case of the 1st deferred $200,000, 2nd deferred $300,000 and the 3rd deferred $400,000. When payable dividends on the 1st, 2nd and 3rd classes of deferred shares are also restricted to the dividends declared on the preceding class, and in the case of the 1st deferred, on the common shares paid in the preceding fiscal year of the company. The 1st and 2nd deferred shares carry one vote and the 3rd deferred carry three votes per share.

The deferred shares are convertible into common shares commencing April 1970 in the case of the 1st deferred and in a year subsequent to the conversion of the 1st deferred in the case of the 2nd deferred, and in a year subsequent to the conversion of the 2nd deferred in the case of the 3rd deferred. These shares are convertible under specific conditions on the basis of one deferred share plus a cash amount for one common share as follows:

	May be converted in the year following the year in which the consolidated net profit after tax exceeds	Or in any event after	Converted on basis of 1 common share for 1 deferred share plus cash of—
1st deferred shares	$200,000	April 30, 1976	$0.50
2nd deferred shares	$300,000	April 30, 1976	$1.00
3rd deferred shares	$400,000	April 30, 1980	$1.50

c) Stock option plan

Under an incentive stock option plan the Board of Directors have granted options to full time officers and other employees covering 35,000 common shares of the company (of which 10,000 were granted to officers) exercisable at $1.875 per share between November 1, 1968 and March 31, 1974.

During 1968, options on 5,500 shares were exercised for a total cash consideration of $10,312. In lieu of exercising options with respect to 3,000 common shares certain optionees elected under the terms of the plan to receive 1,720 common shares having an aggregate market value equivalent to the value of the stock option benefits on the said 3,000 shares. Capital stock has been increased by $3,225 ($1.875 for each of the 1,720 shares issued in this connection) and a corresponding amount charged to salary expense.

d) Common shares reserved for future issue

5,000 common shares are reserved for issue under the terms of an agreement dated February 29, 1968 under which the company will acquire certain inventory and equipment valued at $13,000 upon the vendor obtaining clear title thereto.

450,000 common shares are reserved for possible conversion of the 1st, 2nd and 3rd deferred shares into common shares of the company.

A further 26,500 common shares are reserved for the future exercise of options under the company's stock option plan.

6. Lease commitment

The company has a five year lease with a five year option to renew for premises rented from The de Havilland Aircraft of Canada, Limited. The annual rental is based on approximately 115% of de Havilland's normal expense costs in respect of such premises, and is estimated at $120,000 per year.

7. Pension plans

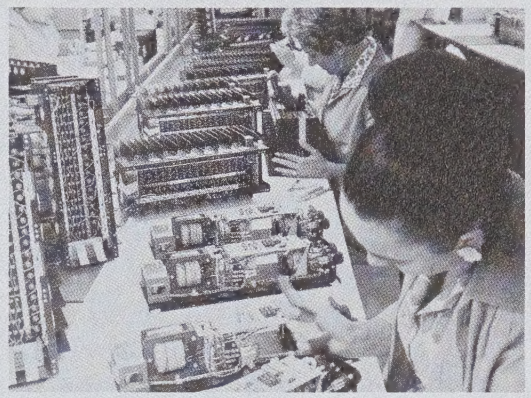
The company has funded pension plans covering substantially all of its employees. The contributions by employees together with those made by the company are deposited with trustees according to the terms of the plans. Pensions at retirement are related to remuneration and years of service. The amounts charged to income (including amounts paid to government pension plans) were $128,612 in 1968, which amount includes amortization of prior service costs.

The unfunded prior service pension costs at December 31, 1968 were approximately $39,000 and these will be funded on a straight line basis over the next 21 years. All vested benefits are fully funded.

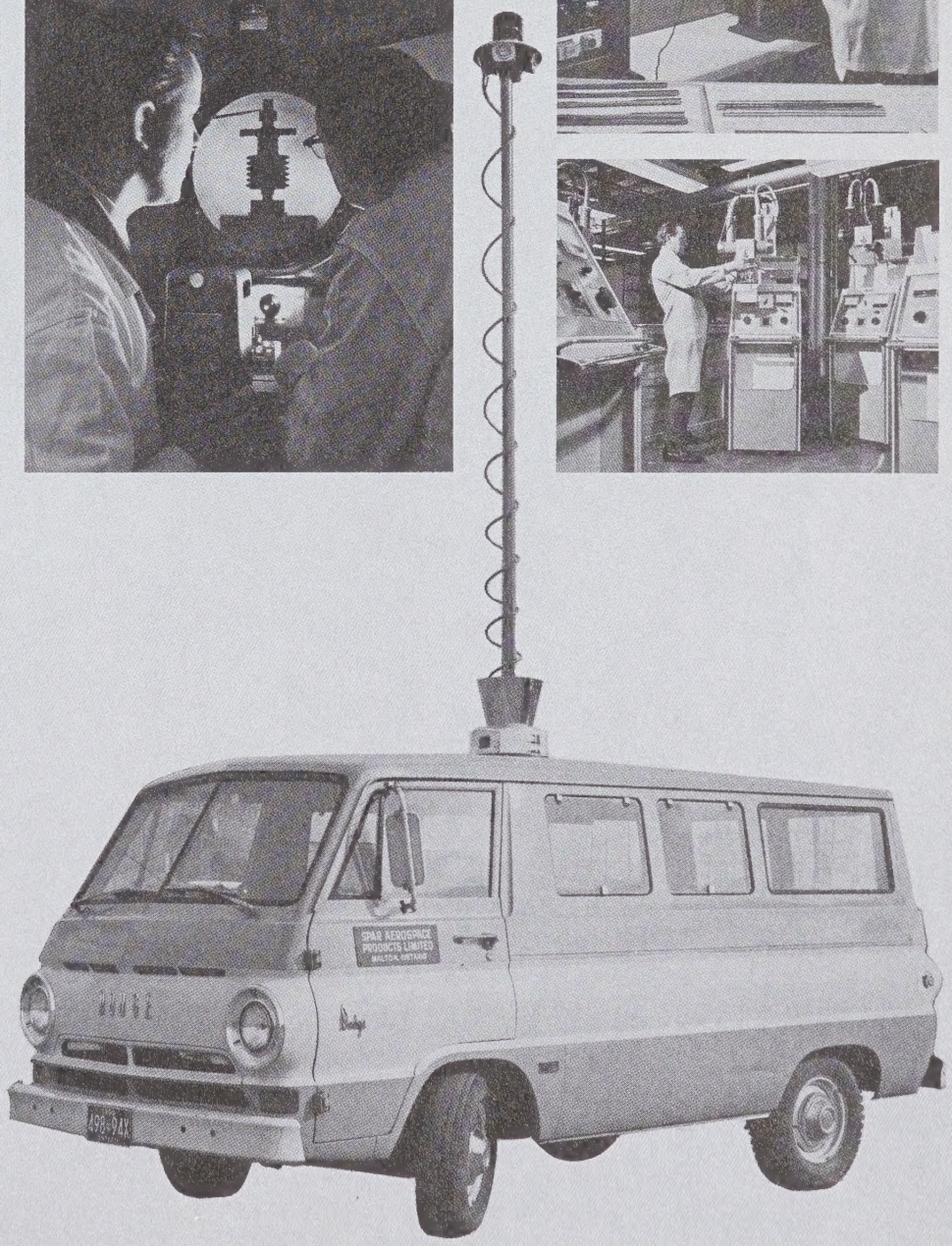
8. Directors' remuneration

The aggregate remuneration paid by the company to directors and senior officers amounted to $100,572 during the year. In addition, $50,000 was paid to Gainsborough Management Limited under the terms of a management agreement covering certain senior management services supplied by Gainsborough. The management fee payable for 1969 and subsequent years to 1974 in this connection is to be based on 1% of gross sales (up to a maximum annual fee of $75,000).

Designing the Future



Currently, Spar is concentrated in seven major technology areas: Mechanical Products, Electro-Optics, Power Products, Medical Products, Underwater Systems, Polyurethane Foam Products and Repair and Overhaul. Spar's demonstrated capability is available for programs which demand unusual sophistication in these fields.



SPAR

MECHANICAL PRODUCTS

Design of STEM antennas, boom and actuators for spacecraft . . . Space Systems, thermal analysis, structural design, dynamics, ground environment masts, lighting systems, actuators.

ELECTRO-OPTICS

Products and capabilities ranging from cameras, fire detection through sophisticated optical system and infrared target acquisition systems.

POWER PRODUCTS

Proprietary coulometric charge control of nickel-cadmium batteries in space, aircraft, ground and marine application backed up by existing line of airborne power equipment.

MEDICAL PRODUCTS

Series of unique, highly mobile x-ray machines backed by support and supply capability.

UNDERWATER SYSTEMS

Design and manufacture of decompression computer for military and commercial markets . . . Computer assisted diving profile studies . . . oceanographic programs.

FOAM PRODUCTS

Polyurethane foam radomes, special structures, insulation to meet military and commercial requirements.

REPAIR and OVERHAUL

Major activity in approved facility to perform R & D on aircraft hydraulic, electronic and pneumatic instrumentation, avionics power devices, etc. Agency sales of certain major lines of avionics, supporting Canadian military and commercial aircraft.

Spar Aerospace Products Ltd.,
Box 6022, Toronto International Airport
Ontario, Canada Phone (416) 676-3333
Telex 02-29362 Sparmalt Tor/Cable Sparmalton Tor